an image capturing device coupled to the cell holder, the image capture device being adapted to capture at least one image in at least one of the plurality of sites;

an illumination apparatus comprising a flexible liquid light guide coupled to the cell holder for highlighting the plurality of sites in a relatively even spatial manner for image capturing purposes;

an image processing device coupled to the image capturing device, the image capturing device being adapted to convert the image into a digital representation; and

a database storage device comprising a database management element coupled to the image capturing device, the database storage device being adapted to retrieve the digital representation of the image from the image processing device and storing the digital representation.

3.   (Amended)   The system of claim 1 wherein the illumination apparatus comprises sub-elements, at least one of the sub-elements being positioned away from the image capturing device to prevent a possibility of vibration from the at least one of the sub-elements to be transmitted to the image capturing device.

6.   (Amended)   The system of claim 1 wherein the image capturing device comprises a magnification of at least 1X or greater to capture the image of the site.

8.   (Amended)   The system of claim 1 wherein the liquid light guide is characterized as a flexible member that substantially prevents vibration from an element of the illumination apparatus to be transferred to the image capturing device.

11.   (Amended)   A database system comprising:

a plate comprising a plurality of sites in a spatial orientation, each of the sites being capable of holding a plurality of cells to be imaged;

a light source comprising a flexible liquid light guide coupled to the plate for illuminating the plurality of cells in a relatively uniform spatial manner for image capture purposes;

an image capturing device to capture a plurality of images of at least one of the sites, the image capturing device coupled to the plate;

an image processing device to combine a first image and a second image from the plurality of images, the image processing device coupled to the image capturing device, the

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image processing device being adapted to form a plurality of respective features of the plurality of images; and

a database storage device comprising a database management element coupled to the image processing device, the database storage device being adapted to retrieve the plurality of features and store the plurality of features.

14.   (Amended)   The system of claim 11 wherein the image capturing device comprises a magnification of at least 1X or greater to capture the plurality of images of the cells.

16.   (Amended)   A system for capturing cellular information from a population of cells, the system comprising:

an image acquisition system comprising a charged coupled camera adapted to capture an image of a plurality of manipulated cells, the illumination apparatus providing for an acquisition of the image of the plurality of manipulated cells;

an illumination apparatus comprising a flexible liquid light guide coupled to the image acquisition system for highlighting the plurality of manipulated cells; and

a database system coupled to the image acquisition system, the database system being adapted to be populated with information of the image of the plurality of manipulated cells;

wherein the information comprises a plurality of descriptors, each of the desciptors comprising a plurality of features, each of the features corresponding to a cellular or subcellular component from the plurality of manipulated cells.

18.   (Amended)   The system of claim 16 wherein each of the features provides a characteristic selected from at least a count, area, perimeter, length, breadth, fiber length, fiber breadth, shape factor, elliptical form factor, inner radius, outer radius, mean radius, equivalent radius, equivalent sphere volume, equivalent prolate volume, equivalent oblate volume, equivalent sphere surface, average intensity, total intensity, optical density, radial dispersion, texture difference, a population statistic value, and a spatial value of the plurality of manipulated cells.

29.   (Amended)   A system for capturing images of cells or cell structures from multiple cell holders, each comprising a plurality of sites in a spatial orientation, each of the sites being capable of holding a plurality of cells to be imaged, the system comprising: